

Appl. No. 10/771,487
Amdt. Dated Sep. 20, 2004
Reply to Office Action of Jun. 18, 2004

REMARKS

The Examiner's appreciation and indication of allowability of claims 4, 5 and 6 are acknowledged.

Claim Rejections under 35 U.S.C. 112

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. To overcome these rejections, applicant has respectively amended claim 1, 2, 4, 5, 7 and 8 to satisfy the 35 U.S.C. 112 requirements.

The Examiner questions usage of "a plurality of shielding plates are located every adjacent two lines, respectively". In fact, the full citation in the claims is "a plurality of shielding plates are located BETWEEN every adjacent two lines, respectively". With the word "between" in front of the phrase "every adjacent two lines", the whole sentence should not be infinitive any more. Anyhow, in claims 1, 4 and 7, Applicant has further switched the positions of the words "adjacent" and "two" to precisely describe the structure thereof. It is believed that the newly presented citation of "between every two adjacent ..." meets the 112 requirements. Attachment A of this amendment shows there are 582 US patents using the same term to describe the same situation. Removal of rejection under 112 is respectfully requested.

In claim 4, the term "involvement with the spacer" is replaced by "contacting" to consistent with the Examiner's interpretation.

Based upon FIGS. 3, applicant has respectfully replaced the "along one line"

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in claims 2, 5 and 8 with "in a row" to more clearly describe the arrangement of signal pads and ground pads.

Claim Rejections under 35 U.S.C. 103(a)

Claims 1-3 and, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaman et al in view of Simmons et al.

Claim 1, as amended, defines a cable assembly comprising a cable including a plurality of lines, a printed circuit board and a plurality of shielding metallic plates. Each line includes a pair of signal conductors and a ground contactor. Each of said shielding plates is **not fixed** to any portions of the two neighboring lines except the ground conductor of only one of said neighboring lines.

Referring to FIGS. 5, 6 and 9 of Beaman et al., the wire-terminating assembly disclosed therein comprises a plurality of twinax wires 10, a printed circuit board 60 and a plurality of metal termination clips 30. Each twinax wire 20 is comprised of two parallel copper signal wires 21, 22 that are covered with insulative dielectric material 23, 24 and surrounded by a thin metallized shield 26 and a third bare copper wire 25 or drain wire is located between the two insulated signal conductors 21, 22. The metal termination clips 30 are attached to the corresponding twinax wire 20 using **interference fit** (lines 11-13, page 5) and electrical connect with corresponding copper wires 25.

As each of the metal termination clips 30 comprises an elongated portion 33 extending beyond the end of the signal wires 21, 22 and disposed within a

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corresponding slot 66 defined in printed circuit board 60, the termination clips 30 **can not** be securely held by the printed circuit board 60. For solving this problem, the metal clip 30 forms a curved portion, the size and shape of the curved portion of the metal clip 132 corresponds to the size and shape of the twinax wire 120 (lines 48-50, column 5). Obviously, the metal clip 30 is attached to the corresponding twinax wire 20 by **interference fitting** the curved portion to the twinax wire 20, that is, **the curved portion is fixed to the corresponding twinax wire 20**. Thus, Beaman et al. does **NOT** disclose the shielding plates does not fix to any portions of the two neighboring lines except the ground conductor of only one of said neighboring lines.

Simmons et al. discloses a cable 6 that encloses a plurality of lines.

Since neither Beaman et al. nor Simmons et al. discloses that the shielding plate **is not fixed** any portions of the two neighboring lines except the ground conductor of only one of said neighboring lines, combining Beaman et al. with Simmons et al. can not obtain the subject matter of claim 1. Amended Claim 1 is thus **NOT** obvious over Beaman et al in view of Simmons et al. Claims 2-3 should also be allowable since they depend from claim 1, either directly or indirectly.

Similarly, claim 7 as amended, defines a method of making a cable connector assembly, comprising **steps of fixing the ground conductor of each of said lines to the corresponding shielding plate; wherein each of said shielding plates is not fixed to any portions of the neighboring lines except the ground conductor of only one of said neighboring lines**. For the same reason described above, amended claim 7 is also **NOT** obvious over Beaman et al in view of Simmons et al.

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Claims 8-9 should also be allowable since they depend from claim 7, either directly or indirectly.

The newly added claim 10 defines that **the printed circuit board dose not include an undercut extending from the second edge for receiving the shielding plate**, which is clearly shown in the drawings of the present invention. None of the cited reference discloses such feature. In fact, regarding lines 48-50, column 5 of Beaman et al, in conjunction FIG. 6, it defines that **multiple slots 66 in the printed circuit card 60 are used to align the twinax wires 20 to the terminal pads 65 on printed circuit card 60 corresponding to the length of the elongated portion 33 of the metal termination clip 30 attached to each of the twinax wires 20**, which results weakened overall rigidity during the assembly as well as increasing whole cost of the electrical connector due to complicated process of the printed circuit card 60.

Therefore, claim 10 is patentably defined over the cited reference. Newly added claims 11-12 are also patentably for their dependency from claim 10.

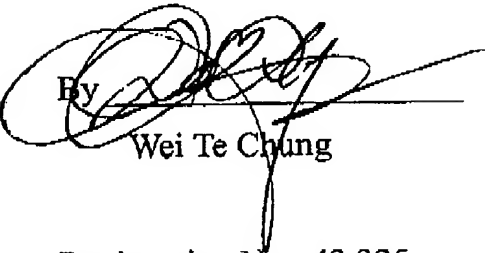
It is understood that similar to the allowable claim 4, claims 1, 7 and 10 all use the negative limitations way to define over the Beaman et al. reference.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance and an action to such effect is earnestly solicited.

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